

Docket No. 200314366-1

Remarks

This Amendment is responsive to the Office Action of September 20, 2005.
Reexamination and reconsideration of claims 6 and 34-38 is respectfully requested.

Summary of The Office Action

Claim 6 was withdrawn from consideration by the Examiner.

Claims 34-38 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 27-29 of U.S. Publication Number US 2005/0036004 A1.

Claims 34-38 were rejected under 35 USC 102(b) as being anticipated by Baughman et al. (US Pat. 5,608,436).

Claims 34-38 were rejected under 35 USC 102(e) as being anticipated by Park et al. (US Pat. 6,757,973).

Claims 34-38 were rejected under 35 USC 102(b) as being anticipated by Mrvos et al. (US Pat. 6,409,312).

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Election/Restriction

Claim 6 is amended by the present response to recite a fluid ejecting device such that it is similarly classified as claim 34. Thus the restriction should be withdrawn. It will be appreciated that a print cartridge is one type of fluid ejecting device.

If the restriction is still maintained, Applicant submits the following response. The Examiner has withdrawn claim 6 from consideration because it is drawn to a print cartridge, purportedly classified in Class 347/87, while claims 34-38 are in a different classification of Class 347/47. No other evidence showing that the claims are independent or distinct were presented. Applicant traverses this restriction.

MPEP 803 states:

There are two criteria for a proper requirement for restriction between patentably distinct inventions:

- (A) The inventions must be independent (see MPEP § 802.01, § 806.06, § 808.01) or distinct as claimed (see MPEP § 806.05 - § 806.05(j)); and
- (B) There would be a serious burden on the examiner if restriction is not required (see MPEP § 803.02, § 808, and § 808.02).

The first criteria (A) has not been met since insufficient evidence has been provided in the Office Action. Merely because two claims might be classified in separate classes does not itself prove they are distinct inventions in every case. Applicant appreciates that separate classifications may be prima facie evidence, but not in this case. This is only one possible factor to consider especially if multiple classifications may apply or if the proposed classification is improper. Many patents are classified in multiple classes. In fact, the primary reference of Park, cited by the Examiner, is classified in 3 different U.S. Classes.

Regarding the purported classification, Applicant respectfully submits that Class 347/87 describes a cartridge with integral ejector. Present claim 6 is not directed to and does not recite an integral ejector. Thus, the alleged classification in 347/47 does not appear correct. Therefore, the basis for the restriction does not support the restriction.

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As for the second criteria (B), there is no evidence that a serious burden exists. Claim 6 recites very similar limitations as claim 38 such as a substrate having a feature and the feature is formed by a first substrate removal process and a different second substrate removal process. Thus, the present prior art search applies to claim 6 as equally as it does to present claims 34-38.

MPEP 806.03 specifically states that "restrictions should never be required" in such a case where the claims are "different definitions of the same disclosed subject matter, varying in breadth or scope of definition." This is the case with the present claims. For this additional reason, the restriction is not proper and should be withdrawn.

Furthermore, **MPEP 803** states:

"If the search and examination of all the claims in an application can be made without serious burden, the examiner must examine them on the merits, even though they include claims to independent or distinct inventions."

Applicant respectfully requests that claim 6 be reinstated and examined.

Obviousness-Type Double Patenting Rejection

Claims 34-38 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 27-29 of U.S. Publication Number US 2005/0036004 A1.

Applicant respectfully submits that U.S. Publication Number US 2005/0036004, which is serial number 10/640,067, has been amended by way of an amendment filed on September 9, 2005. In that amendment, claim 27 was canceled and independent claim 28 was amended. Since claim 28, the basis for the present double patenting rejection, has now changed, Applicant believes the double patenting rejection is no longer applicable. Thus, Applicant requests that the double patenting rejection be withdrawn.

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If a Terminal Disclaimer is necessary, one will be filed if and when the present application is allowed.

The Present Claims Patentably Distinguish Over the References of Record

I. Baughman et al. - 102(b) Rejection

Claims 34-38 were rejected under 35 USC 102(b) as being anticipated by Baughman. The Office Action cites Figures 4A-6D of Baughman as teaching the present claims. Applicant respectfully refers to column 5 starting at line 19 where Baughman describes Figures 4A-D and the etching process used. Applicant finds no discussion of a fluid-ejection device formed in a manner to reduce debris. In fact, debris is not even mentioned by Baughman.

Baughman describes figures 5A-D at column 6, lines 26-33, and describes figures 6A-6D at column 6, line 34 to column 7, line 41. Again, removing debris is not mentioned by Baughman.

Therefore, Baughman fails to teach or suggest a fluid-ejection device as recited in claim 34 comprising an orifice layer where at least one of the first substrate surface and the second substrate surface being mechanically conditioned by at least one of the removal processes prior to the orifice layer being positioned over the first substrate surface, at least in part, to reduce an incidence of debris occluding ink flow through individual nozzles. Thus, Baughman fails to support the rejection and the rejection should be withdrawn.

Since claim 34 recites features not taught or suggested by the reference, claim 34 patentably distinguishes over the reference. Accordingly, dependent claims 35-37 also patentably distinguish over the reference and are in condition for allowance.

Regarding independent claim 38, since Baughman fails to teach or suggest removing debris, it then follows that Baughman fails to teach or suggest a micro electro mechanical systems device comprising at least one feature formed in the substrate, the feature being formed with at least a first substrate removal process and a second different substrate removal process, wherein the second different substrate removal process also removes debris created by the first

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substrate removal process. Thus, Baughman fails to support the rejection and the rejection should be withdrawn.

II. Park et al. – 102(e) Rejection

Claims 34-38 were rejected under 35 USC 102(e) as being anticipated by Park et al. (US Pat. 6,757,973). The Office Action cites figures 1-14 and no specific citations are provided from the specification except for reference numbers from the figures.

Park teaches forming throughholes 4 by sandblasting a substrate 1. See column 3, lines 39-42, or column 3, lines 45-46, or column 3, lines 59-61. Starting at column 4, line 40, Park describes a method for forming a throughhole. In particular, the method explains sandblasting the substrate to form a throughhole (see column 5, lines 13-35). No other process for removing portions of the substrate to form the throughhole are mentioned.

Therefore, Park fails to teach or suggest a substrate comprising a fluid-handling slot formed by at least two substrate removal processes as recited in claim 34. Accordingly, Park also fails to teach or suggest a second different substrate removal process. Therefore, Park fails to teach or suggest at least one feature formed in a substrate, the feature being formed with at least a first substrate removal process and a second different substrate removal process, as recited in independent claim 38. Thus, Park fails to support the rejection and the rejection should be withdrawn.

Additionally, Applicant finds no mention in Park of removing debris. Therefore, Park fails to teach or suggest an orifice layer as recited in claim 34 where at least one of the first substrate surface and the second substrate surface being mechanically conditioned by at least one of the removal processes prior to the orifice layer being positioned over the first substrate surface, at least in part, to reduce an incidence of debris occluding ink flow through individual nozzles.

Regarding independent claim 38, claim 38 recites the second different substrate removal process also removes debris created by the first substrate removal process. Since Park does not

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mention removing debris and only describes one sandblasting process, Park fails to teach or suggest the claimed device of claim 38. Thus, Park fails to support the rejection and the rejection should be withdrawn.

III. Mrvos et al. – 102(b) Rejection

Claims 34-38 were rejected under 35 USC 102(b) as being anticipated by Mrvos et al. (US Pat. 6,409,312).

Applicant respectfully submits that Mrvos fails to teach or suggest the present claims and thus the rejection is not supported. For example, Mrvos teaches forming ink slots or ink vias using a single substrate removal process, but not two substrate removal processes are recited claim 34. See for example, column 1, lines 58-60, or column 2, lines 41-44, or column 2, lines 63-65, or column 3, lines 16-20, or column 4, lines 45-51, or column 5, lines 14-18. All of these sections describe forming an ink slot, via, or channel using a single substrate removal process. Therefore, Mrvos fails to teach each and every limitation in the present claims and the rejection cannot stand.

Additionally, claim 34 recites an orifice layer where at least one of the first substrate surface and the second substrate surface being mechanically conditioned by at least one of the removal processes prior to the orifice layer being positioned over the first substrate surface, at least in part, to reduce an incidence of debris occluding ink flow through individual nozzles. Mrvos only mentions removal of debris once during the formation of the ink supply channel 38. This occurs in column 5, lines 16-18 and states that debris is removed by washing. Mrvos states:

“After laser ablating the nozzle plate 16, the nozzle plate 16 must be washed to remove debris therefrom.” Column 5, lines 16-18.

It is well known that washing does not form ink slots and does not remove substrate material to form ink slots. Therefore, Mrvos fails to teach or suggest this additional limitation in claim 34.

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Dependent claim 35 recites that that fluid-handling slot is formed utilizing three different substrate removal processes. Dependent claim 36 recites that at least two different substrate removal processes. Since Mrvos only teaches using one substrate removal process, Mrvos also fails to teach or suggest dependent claims 35 and 36.

Mrvos also fails to teach or suggest independent claim 38. Mrvos describes only using a single substrate removal process to form ink channels. Furthermore, Mrvos only describes washing a nozzle plate to remove debris. Therefore, claim 38 is not taught or suggest by Mrvos and the rejection is not supported by Mrvos.


Since claim 34-38 recite features not taught or suggested by the references, alone or in combination, claims 34-38 patentably distinguish over the references and are in condition for allowance.

Conclusion

For the reasons set forth above, claims 34-38 patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

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